

REMARKS

I. Status of Claims

Claims 1-53 are currently pending in this application, as presented in the Preliminary Amendment dated September 27, 2006, and stand rejected by the non-final Office Action dated May 9, 2007. Applicant presents the following remarks and arguments in support of the patentability of the pending claims.

II. Rejection under 35 U.S.C. § 102

The Office has rejected claims 1, 5-17, 19-33, 35-43, and 47-53 under 35 U.S.C. § 102(b) as anticipated by WO 00/66510 to Lyons et al. ("Lyons"). The Office asserts that Lyons discloses a composition comprising ground calcium carbonate ("GCC") particles and precipitated calcium carbonate ("PCC") particles. See Office Action at 2. Moreover, the Office asserts that Lyons discloses that the calcium carbonate particles may have a steepness factor larger than 38 for GCC and larger than 50 for PCC. *Id.* Finally, the Office asserts that Lyons further teaches that the composition may comprise a particle size of both calcium carbonates of less than 0.8 μm . *Id.* Applicant respectfully traverses the rejection.

In order to show anticipation, the Office must provide a single reference that discloses, either expressly or inherently, each and every element of the pending claims. See MPEP § 2131. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." *Id.* (quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236 (Fed. Cir. 1989)).

Lyons does not teach, either expressly or inherently, a composition comprising the combination of a first pigment component comprising a GCC having a psd steepness factor ranging from about 30 to about 45, and a second pigment component comprising a PCC having a psd steepness factor ranging from about 55 to about 75, and certainly not with as complete detail as contained in the pending claims as required under § 102. In particular, the present inventors surprisingly discovered that a paper coated with the recited combination of a mid-to-low steepness GCC with a mid-to-high steepness PCC results in a synergistic improvement in at least the opacity, brightness, and print gloss of that paper as compared to either a paper that has been coated with a pigment comprising only one of the individual components or to a paper that has been coated with a combination of GCC and PCC with steepness factors not in accordance with the pending claims. *See* Specification at page 3, line 22 to page 4, line 2 and the examples on pages 27-32. Neither that recited combination nor the resulting synergistic effect is either taught or suggested by Lyons.

While Lyons offhandedly remarks that its composition may comprise a combination of GCC in addition to PCC (*see* page 5, lines 13-16), it is clear that Lyons does not seriously contemplate such a combination nor describe the blending of such a combination in any detail as required for a proper finding of anticipation under § 102. In fact, Lyons does not disclose a single embodiment or example of a pigment composition comprising a combination of both a PCC and a GCC. In contrast, each of the examples disclosed in Lyons relates to a kaolin blended with either a GCC or a PCC—not a combination of the two. *See* Examples 1-5 on pages 25-31.

Furthermore, Lyons discloses at most a combination of GCC and PCC with a single aggregate steepness factor for that entire blend. Nowhere does Lyons teach that its composition may comprise separate GCC and PCC calcium carbonate components such that each component has a separate psd steepness factor. Moreover, it certainly does not teach any combination of two calcium carbonate components wherein the GCC has a psd steepness factor ranging from about 30 to about 45 and the PCC has a psd steepness factor ranging from about 55 to about 75, as recited in the pending claims. Quite simply, the portion of the specification to which the Office points for a teaching of the steepness factor of the two different carbonates (page 8, lines 12-17) is at best ambiguous as to the steepness factor of each, and certainly does not teach in any detail a combination of the two containing the particular steepness factors as claimed. The lack of any disclosure regarding the psd steepness values for GCC and PCC, in combination with Lyons's general ambiguity regarding a combination of GCC and PCC, shows that the reference cannot properly anticipate the pending claims of this application. See *In re Hughes*, 245 F.2d 184, 188, 145 U.S.P.Q. 467, 471 (C.C.P.A. 1965) ("Words in a reference are to be construed in light of the relevant surrounding circumstances in each case, and a reference in any event is good only for that which it clearly and definitely discloses."); see also *In re Turtay*, 304 F.2d 893, 899, 134 U.S.P.Q. 355, 360 (C.C.P.A. 1962) ("It is well established that an anticipation rejection cannot be predicated on an ambiguous reference.").

At least because Lyons fails to teach a composition comprising a combination of a first pigment component comprising a GCC having a psd steepness factor ranging from about 30 to about 45, and a second pigment component comprising a PCC having

a psd steepness factor ranging from about 55 to about 75, it cannot anticipate the pending claims. Applicant respectfully requests that the rejection be withdrawn. The Office admits that Lyons does not teach a kaolin with The Office asserts that it would have been

III. Rejections under 35 U.S.C. § 103

A) Lyons in View of Nishiguchi

The Office has rejected claims 2-4 and 18 under 35 U.S.C. § 103(a) as obvious over Lyons in view of U.S. Patent No. 5, 879,442 to Nishiguchi et al. ("Nishiguchi"). The Office admits that Lyons is silent with regards to the ratio of the amount of GCC to PCC, but believes that Nishiguchi teaches the claimed ratios and that it would have been obvious to the skilled artisan to have combined the teachings of Lyons with the ratio of Nishiguchi. See Office Action at 6. Applicant respectfully traverses this rejection.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to have modified the reference or to have combined references' teachings in an effort to achieve the subject matter of the rejected claims. Second, the skilled artisan must have had a reasonable expectation of success in making the asserted modification or combination. Finally, the reference or references must teach or suggest all the claim limitations. See MPEP § 2143. The recent decision in *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (April 30, 2007), recognized that a showing of "teaching, suggestion, or motivation" could provide helpful insight in determining whether the claimed subject

matter is obvious under § 103(a) and clarified that, “[t]o facilitate review, this analysis [of whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue] should be made explicit.” Applicant submits that the Office has failed to meet those requirements and respectfully requests that the rejection be withdrawn.

That Lyons fails to teach or disclose any ratio of the amount of GCC to the amount of PCC, as the Office has admitted, emphasizes the lack of any detailed disclosure in Lyons related to a pigment composition comprising the combination of the two. Applicant has already discussed other deficiencies of Lyons above. Even if the skilled artisan were to have combined the teachings of Lyons with those of Nishiguchi, the subject matter of the pending claims still would not have been achieved. In particular, Lyons fails to teach any combination of GCC and PCC with the steepness factors recited in the pending claims. Nishiguchi also fails to remedy this deficiency in that, while that reference may disclose particular combinations of GCC and PCC, it does not teach or suggest a composition in which the GCC has a psd steepness factor ranging from about 30 to about 45 (or indeed any mid-to-low steepness) in combination with a PCC that has a psd steepness factor ranging from about 55 to about 75 (or any mid-to-high steepness). Nor does Nishiguchi recognize the surprising synergistic effect achieved by the combination of the two.

As such, whatever Nishiguchi may teach regarding ratios of PCC and GCC, it does not remedy any deficiencies of Lyons and the combination of those references would not have suggested the desirability of the currently claimed subject matter to the skilled artisan. Lyons in view of Nishiguchi cannot support a *prima facie* case of

obviousness of the pending claims and, thus, Applicant respectfully requests that the rejection be withdrawn.

B) Lyons in View of Lorusso

The Office has rejected claims 45 and 46 under 35 U.S.C. § 103(a) as obvious over Lyons in view of U.S. Patent Application No. 2005/0126730 to Lorusso ("Lorusso"). The Office appears to admit that Lyons does not teach a kaolin with a shape factor of greater than about 30, but believes that it would have been obvious to one of ordinary skill in the art to combine the high shape factor kaolin of Lorusso with the composition of Lyons. See Office Action at 7. In particular, the Office asserts that the skilled artisan would have been motivated by the fact that Lorusso is also drawn to a composition for paper and teaches that kaolin particles with a shape factor larger than 60 are suitable for paper filler. *Id.* Applicant respectfully traverses this rejection.

First, whatever Lorusso may say about the shape factor of kaolin, it also fails to remedy the defects of Lyons explained above. In particular, like Lyons and Nishiguchi, Lorusso fails to teach or suggest at least a composition comprising GCC having a psd steepness factor ranging from about 30 to about 45 in combination with a PCC having a psd steepness factor ranging from about 55 to about 75. Nor does Lorusso recognize the surprising synergistic effect achieved by the combination of the two.

Second, Lyons explicitly teaches away from using the high shape factor kaolin purportedly taught by Lorusso. In particular, Lyons teaches that "the steep psd kaolin employed in the present invention may be obtained from a relatively blocky kaolin clay"; "for example, it may have a relatively low shape factor" and "the shape factor may for example be less than 25, eg less than 20, especially about 15 or less." See page 17,

line 14 through page 18, line 13. Such a clear teaching away is an indication that the skilled artisan would not have been motivated to make the Office's proposed combination in an effort to achieve the subject matter of the pending claims, or at least would not have found that combination desirable. See MPEP § 2141.02. Indeed, the MPEP states that "[i]t is improper to combine references where the references teach away from their combination." MPEP § 2146(X)(D)(2) (*citing In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983)).

As such, whatever Lorusso may teach regarding high shape factor kaolin, it does not remedy any of the deficiencies of Lyons and the combination of those references would not have suggested the desirability of the subject matter recited in claims 45 and 46 to the skilled artisan. Moreover, given Lyons's express teaching away from the high shape factor kaolin taught in Lorusso, the skilled artisan would have had no motivation to make the Office's suggested combination. Therefore, Lyons in view of Lorusso cannot support a *prima facie* case of obviousness of the pending claims and Applicant respectfully requests that the rejection be withdrawn.

IV. Conclusion

In view of the foregoing remarks and arguments, Applicant respectfully submits that the present application is in condition for immediate allowance. If the Office has any questions regarding this Response or the application in general, the Office is invited to contact the undersigned representative at the information listed below.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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